REMARKS

This reply is submitted in response the Office Action dated December 29, 2004. In the Office Action, claims 1 to 5, 7 and 8 are rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,389,453 to Willis ("*Willis*"). Applicants respectfully disagree with and traverse the rejections as set forth below.

Of the pending claims at issue, claims 1 and 5 are the sole independent claims. Claim 1 recites a communication method in a network in which a feed and receivers are connected via a unidirectional line and the feed and the receivers are respectfully connected to a bidirectional line via routers. The communicating method includes: allowing a first router to transmit a first packet including path control information to a first receiver; allowing the first receiver to transmit a second packet obtained by capsulating said first packet to a first interface of said feed via said first router, the bidirectional line, and a second router; allowing the feed to extract the first packet by decapsulating the second packet, transmit the first packet to the second router from a second interface, and transmit the first packet to a third receiver from a third interface via said unidirectional line; and includes allowing the third receiver to transmit the first packet to a third router.

Claims 5 recites a transmitting apparatus having first, second, and third interfaces. The transmitting apparatus: is connected to a first interface of a router via the first interface and a bidirectional line; is connected to a second interface of the router via the second interface and the bidirectional line; is connected to a receiver via the third interface and a unidirectional line; receives a capsulated packet including path control information via the bidirectional line, the router, and the first interface from the receiver; and decapsulates the capsulated packet, transmits the path control information extracted due to the decapsulation to the router via the second interface and the bidirectional line, and transmits the path control information to the receiver via the third interface and the unidirectional line.

Applicants believe that *Willis* is distinguishable for a number of reasons. First, nowhere does the *Willis* reference teach or suggest a method of communicating that includes a first receiver that encapsulates a first packet into a second packet. For example, in one embodiment of the claimed invention the path control information packet (1) sent from the router 7 is received by one interface of the receiver 4. Because the receiver 4 cannot send the packet to the

unidirectional line, the *receiver* encapsulates the packet (see, Specification, page 10, lines 4 to 7). On the contrary, *Willis* provides that the *router* 25 functions to encapsulate packets (see, *Willis*, col. 4, lines 37 to 39).

Second, nowhere does *Willis* teach or suggest a method of communicating that includes a feed with three interfaces, wherein the *feed* extracts the first packet from the second packet by decapsulating the second packet and also acts as a transmitter that is connected to the satellite (unidirectional) line. In contrast, *Willis* provides that a *router* 17 decapsulates the packet and forwards the decapsulated packet on (see, Willis, col. 4, lines 43 to 45). Furthermore, *Willis* provides that the router 17 performs the decapsulation, as discussed above, and also provides for a separate transmitter 41 to connect to the satellite line (see, *Willis*, Fig. 1).

Applicants have determined that prior Unidirectional Link Routing ("UDLF") systems, such as the ones proposed by the IETF (Internet Engineering Task Force) where the router performs the encapsulation and decapsulation, suffer from decreased router performance. According to these prior methods, the UDLR needs to operate on the same router by which the path control protocol operates. A similar system is described in Willis, where the routers 17,25 perform the encapsulation and decapsulation. Therefore, the present invention as claimed in claims 1 and 5 improves over *Willis* and the systems proposed by IETF by relieving the router of the burden of performing the ecapsulations and decapsulations. Accordingly, the routers can operate more efficiently for their intended purpose.

In addition, *Willis* does not teach or suggest transmitting the path control information from the third interface of the feed to the receiver via the unidirectional line. Rather, *Willis* is directed to avoiding errors related to reverse path forwarding checks by converting a router into a virtual boundary router so as to allow packets to travel to other nodes of the network (see, *Willis*, Fig. 1). This method does not contemplate sending path control information, decapsulated via the feed, through the unidirectional line. Based on at least the reasons given above, Applicants respectfully submit that Willis is distinguishable from the claimed invention and thus fails to anticipate the claims at issue.

Accordingly, Applicants respectfully request that the anticipation rejection be withdrawn.

For the foregoing reasons, Applicants submit that the present application is in condition for allowance and earnestly solicits reconsideration of same.

Respectfully submitted,

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